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# Health and Disease in young Sea Dayak Men

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114 In January 1953 recruiting was begun for the Sarawak Rangers for military service in Malaya where formerly they had been 702 employed in a civilian capacity as Iban trackers. After service in Malaya they were to form a nucleus for a military force to defend Sarawak. I was the medical officer to the four recruiting parties from Malaya and this article embodies my findings, impressions and opinions formed during this recruiting campaign. It is confined to the second and third divisions of Sarawak and to the Sea Dayak race.

125 The clinical findings cannot be exterpolated with any con- 702 fidence to the whole population of the area covered since two factors distorted the cross-section of young men presented to me for medical examination and these did not act similarly at different times and places.

All recruits were volunteers. Each recruiting officer would tour his alloted district asking men to come forward and explaining the terms of service. At the same time a message was sent round the long-houses which he was unable to visit announcing the date of the recruiting parade which was invariably held in a town. This produced the first distorting factor: men who were diseased—more especially externally so—would be disinclined to volunteer as it was made clear that they would have to be perfectly fit and pass a medical examination added to which the pengulus frequently stopped men who were, in their opinion, unfit or too unintelligent to serve in the army from presenting themselves.

The second factor was introduced by the recruiting officers. Each officer had his own ideas about what type of Iban would make a good soldier: one might favour the younger man ready to learn, another the older man with worldly experience, a third the Herculean type and a fourth the lithe intelligent type. The bias here is that the older man is more likely to show signs of disease and the thin man was more often suffering from illness than the robust. Further in each region the number of men presenting themselves for each vacancy varied between two and twenty. Thus the officer had to vary his standards of choice and to a lesser extent the medical standards for recruitment were altered. For example in the Third Division 22 out of 351 were

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rejected on the grounds of age or height as compared with 2 out of 153 in the Second Division. Age and height are characteristics obvious to M.O. and recruiting officer alike but in the Third Division it was harder to get suitable men. This statement needs slight modification as halfway through the campaign the minimum height standard was reduced from 62 inches to 60 and the maximum age raised from 30 to 35 years. Nevertheless, even using the new standards 11 out of 351 would still have been rejected in the Third Division and only two in the Second Division.

The medical examination for each man took 8 to 12 minutes depending on whether clerical and clinical help was available. The basis of medical examination was the inter-Service PULHEEMS modified in the following respects to suit the people: no history was taken because past illnesses had rarely been diagnosed beyond the generic names of fever, bellyache or rash: the difficulties in assessing colour perception were too great for this to be done: the abdomen received more attention than normally because of the incidence of malaria: the median, personal and great auricular nerves were palpated for leprous thickening: the soles of the feet were examined for the presence of crab yaws and exercise tolerance tests were perfomed on older men.

SUMMARY OF MEDICAL FINDINGS

| *Place* | *Kapit* | *Song* | *Kanowit* | *Lubok Antu* | *Engkilili* | *Simanggang.* | *Division III* | *Division II* |
|---|---|---|---|---|---|---|---|---|
| No. examined ... ... | 205 | 93 | 53 | 105 | 15 | 33 | 351 | 153 |
| Age and height Rejections | 16 | 2 | 4 | 2 | 0 | 0 | 22 | 2 |
| Total rejected ... ... ... | 45 | 26 | 16 | 17 | 5 | 5 | 87 | 27 |
| Diseases. | | | | | | | | |
| Otitis media ... ... ... | 18 | 7 | 7 | 2 | 0 | 3 | 32 | 5 |
| Albuminuria ... ... ... | 4 | 1 | 1 | 2 | 0 | 0 | 6 | 2 |
| Yaws ... ... ... ... | 2 | 6 | 1 | 9 | 3 | 2 | 9 | 14 |
| Malaria ... ... ... | 4 | 6 | 2 | 4 | 0 | 0 | 12 | 4 |
| Hepatic enlargement ... | 2 | 8 | 1 | 1 | 0 | 1 | 11 | 2 |
| Thyroid enlargement ... | 6 | 5 | 0 | 6 | 0 | 2 | 11 | 8 |
| Respiratory disease ... | 7 | 0 | 0 | 1 | 0 | 0 | 7 | 1 |
| Tinea ... ... ... ... | 2 | 0 | 0 | 0 | 0 | 1 | 2 | 1 |
| Defective eyesight ... ... | 20 | 10 | 7 | 5 | 1 | 2 | 37 | 8 |
| Otitis externa ... ... ... | 5 | 2 | 2 | 0 | 0 | 0 | 9 | 0 |
| Cardiac murmurs ... ... | 5 | 4 | 2 | 5 | 2 | 1 | 11 | 8 |

Other abnormalities were rare and were not of statistical interest so will be stated not tabulated:—localised muscle wasting 3, filariasis (with commencing elephantiasis) 2, primary chancre (syphilis) 1, chronic osteomyelitis 1, scars (of such a nature as to render a man unfit for service) 4, testicular atrophy 1, cysts of

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164 the epididymis 3, varicoceles 2, unimportant bony deformities due to injury 6, gynaecomasia 1, ptosis 2, slight varicosity of leg veins 4, acne vulgaris 4, pterigium 4.

Artificial selection acted in both Divisions so it is fair to pass some comments and to draw some conclusions from these figures.

*Otitis media.* About one third of the cases were active i.e. with perforated eardrums and discharge; the remainder manifested themselves by scarring of the drums and chalk patches (which were indications of past infections). It appears to be three times as common in the Third Division as in the Second and relatively more common towards the large towns of Sibu and Simanggang though the figures are not large enough to prove this conclusively.

*Albuminuria.* Since there were no facilities for the full investigation of albuminuria all cases were rejected presuming that it denoted chronic kidney disease. There was no significant difference between the two Divisions.

*Yaws.* All cases presented as crab yaws; no ulcerated lesions were found. Depigmented scars were occasionally seen. All gradations from physiological hyperkeratosis of the soles of the feet to deep ulcerated fissures were discovered. A thick sole with one deep transverse fissure, not penetrating the epidermis, ½ inch posterior to the ball of the great toe was so common that it was considered natural. Sometimes the difficulty in diagnosis lay in those cases whose deep fissure was accentuated, with a second fissure on the heel and, perhaps, one or two minor ones. I considered these not to be yaws and the criterion I took was multiple fissures, especially if ulcerated at their bases, together with pitting of the rest of the hyperkeratotic skin. It was found that crab yaws was three times as prevalent in the Second Division.

*Chronic Malaria.* This was diagnosed on the grounds of an enlarged spleen perhaps together with an enlarged liver. A history of recurrent fever was never obtained probably because the men were reluctant to tell me anything to their detriment. It was surprising how small the incidence of malaria was in both Divisions. In each it was slightly over 3%. But it was noticeable that those with grossly enlarged spleen—though not numerous—were inferior in build and height. It was likely that the worst chronic malarials were not chosen in the first instance. The figure of 3% cannot be taken to reflect the average incidence over the whole population especially as the men examined were of the age when previously enlarged spleens were contracting due to fibrosis.

*Hepatic Enlargement.* This was recorded but ignored for recruiting purposes provided it was less than 1 inch below the

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costal margin and without any other signs of disease. It was surprising how many livers were enlarged in recruits from Song (mainly Ulu Ketibas). No explanation is offered. 164

*Thyroid Enlargement.* Goitres were not gross in size but were frequent in occurence. Half the cases were diffuse enlargements and half small adenomata localised to one part of the gland. A large goitre is not to be expected in young men but in the long-houses many of gigantic proportions were seen in old people. The striking fact about the incidence of goitre was that 17 of the 19 cases came from the up-river districts namely Kapit, Song and Lubok Antu. It may also be remarked that these places are beyond the tidal reaches: whereas Simanggang, Engkilili and Kanowit are tidal or very close to tidal reaches. Possibly the availability of salt water fish in the latter places provides sufficient iodine to prevent goitre. Sea salt is available in the long-houses in the interior but it is hardly ever added to the cooking and had to be asked for if required. Perhaps salt being so highly prized is insufficiently used.

*Respiratory diseases.* The signs of chest disease were usually so minimal as to be impossible to evaluate without X-ray facilities. Of the 8 cases 5 were ascribed to an acute infection and three were thought to be chronic—either tuberculosis or bronchiectasis. It was surprising considering the high rate of pulmonary tuberculosis in the Far East to find so little amongst these men. Perhaps this is because the life the Ibans lead in a long-house is a healthier one as there is far less overcrowding than in urban dwellings.

*Tinea.* The only cases of this aliment were tinea imbrecator or "kurap". No other skin disease was found.

*Eyesight.* Since 98% of recruits were illiterate special charts had to be made and standardised. The minimum visual acuity accepted was 6/9 or better in each eye and when using both eyes together at least 6/6. Only one in ten failed to attain this standard. My impression is that this is much better than National Service recruits in the U.K. Another fact that emerges is that nearly half the men who were rejected on the grounds of defective eyesight had associated diseases (such as malaria, otitis media, etc.) sufficient to exclude them in any case. One wonders if their visual acuity would have been normal if these other illnesses had not adversely affected their health. 151 164

*Cardiac Murmurs.* These were all systolic and were ascribed to functional causes since no cardiac enlargement or other pathology was found. Murmurs were twice as common in the pulmonary area as at the apex. Only two or three were of a harsh nature and may have denoted slight degrees of pulmonary steno- 147 164

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147 sis or septal patency. In no case was the exercise tolerance test impaired. It is quite possible that some apical systolic murmurs 164 denoted early mitral valve lisions that might progress to stenosis. The absence of indisputable rheumatic carditis was very noteworthy in view of the fact that otitis media was moderately common and as both are closely related to streptococcal throat infections.

164 I am indebted to Dr. T. Wilson of the Institute for Medical Research, Kuala Lumpur and Capt. J. Bolton R.A.M.C. who carried out blood survey on the Sarawak Rangers when they reached Malaya for the following figures giving the incidence of filariasis.

*Second Division*

| | *Number examined.* | *Cases of filariasis.* | % |
|---|---|---|---|
| Simanggang | 27 | 9 | 33 |
| Lubok Antu | 80 | 0 | 0 |
| Engkilili | 10 | 2 | 20 |
| *Third Division* | | | |
| Kapit | 148 | 8 | 5.4 |
| Song | 59 | 0 | 0 |
| Kanowit | 48 | 5 | 10 |

I found two cases of early elephantiasis of the scrotum but was unable to confirm them microscopically.

Quite as interesting as the diseases found were the diseases not found that might have been expected. No leprosy was encountered. Only two men appeared slightly anaemic despite the amount of hookworm infestation that is prevalent in the East. [732] Physical deformities like kyphosis, scoliosis and limb shortening due to fractures were striking by their absence. Only three cases had muscle wasting that might have been attributable to poliomyelitis or encephalitis. No hydroceles or varicoceles were met with, yet in the U.K. about one in twenty males have varicoceles. Only one man had an inguinal hernia—a common condition among English recruits. Veneral disease is hard to diagnose without laboratory aid; one primary chancre was seen but no other manifestation of syphilis. Gonorrhoea (as diagnosed by visible de- [146] posit in the urine) was absent. But V.D. is notoriously easy to conceal. None of the numerous vitamin deficiency diseases were seen.

141 *Height and Weight.* The average heights of recruits at the various towns were as follows:—

| | | *Number* |
|---|---|---|
| Kanowit | 63.9 inches | 53 |
| Simanggang | 63.4 " | 33 |
| Song | 63.3 | 93 |
| Kapit | 63.4 | 205 |
| Engkilili | 63.1 | 15 |

and the general average 63.45 inches. These figures are all a little too high because of the selection by the recruiting officers and I would estimate the right correction to be a reduction of 0.2 or 0.3 inches.

In 1901 A. C. Haddon F.R.S. did a survey of the physical characteristics of the Ibans in all areas and found the average height to be 62.7 inches. Dr. Haddon examined 56 Ibans and with this comparatively small number it is not justified to compare the two averages through the age distribution was roughly the same.

The average weights were:—Song 126 lbs. Simanggang 119. 5 lbs. Engkilili 115 lbs. In other districts the scales used were found to be inaccurate so invalidating the results. The average weight is 120 lbs for a man of 25 years.

*Palangs.* A palang is a piece of bone transfixing the glans penis and usually passing through the urethra. Its purpose is to give the wife greater satisfaction in sexual intercourse. Many primitive people use similar devices. At first I kept no records of their prevalence but my recollection is that in Kapit area 30-40% had them or had perforations for them (perhaps having politely removed them for medical examination.). In Song 1 in 46 in Lubok Antu 2 in 105 and Simanggang and Engkilili none at all. Of those that had palang most were made of bone, but some had slivers of rattan curling up at both ends and others were of wood or brass. The incidence of palangs corresponds very well with my impression of the type of men, i.e those from Kapit still retaining their long hair, multiple tattoos and the sirat instead of European shorts and trousers and being altogether less influenced by civilisation.

Another characteristic of the less westernised Ibans was their extreme shyness in exposing their sexual organs whether wearing palangs or not.

During my tour I spent some time living in long-houses and going round hospital wards in the two Divisions and found that the pattern of disease I saw differed little from what I had found examining recruits.

Naturally a casual observer sees nothing of the mortality among infants nor can he assess the mortality and morbidity among the Ibans. But my impression after examining more than 500 of them is that the health of recruits is extremely good and compares very favourably with National Servicemen in England.

I am grateful to the A.D.M.S. Malaya for permission to publish this article.